

AMENDMENTS TO THE CLAIMS:

The following claim listing replaces all previous versions of the claims.

Claim Listing:

Claim 1 (Currently Amended): A method of stopping an unmanned mine vehicle in a predetermined position, the mine vehicle being controlled by means of a control system comprising at least a first control unit in the mine vehicle, a second control unit outside the mine vehicle and a data transmission connection between said control units,

and the method comprising:

driving the mine vehicle, controlled by its said control system, towards a predetermined position;

monitoring at least ~~the a~~ speed of the mine vehicle and ~~the a~~ speed of the driving power transmission of the mine vehicle,

driving the mine vehicle at a speed significantly lower than ~~the a~~ normal driving speed against at least one physical obstacle that is arranged in a predetermined position;

and stopping the mine vehicle when ~~the a~~ ratio of the speed of the driving power transmission to the speed of the mine vehicle exceeds a predetermined limit value.

Claim 2 (Previously Presented): A method according to claim 1, comprising monitoring the speed of ~~the~~ traction wheels;

and stopping the mine vehicle when the ratio of the speed of at least one traction wheel to the speed of the mine vehicle exceeds a predetermined limit value.

Claim 3 (Currently Amended): A method according to claim 1, comprising monitoring ~~the a~~ rotation speed of ~~the a~~ motor of the mine vehicle when the vehicle is driven at a given gear of ~~the a~~ driving power transmission against the obstacle; and stopping the mine vehicle when the ratio of the rotation speed of the motor to the speed of the mine vehicle exceeds a limit value defined according to ~~the a~~ gear used.

Claim 4 (Previously Presented): A method according to claim 1, comprising driving the mine vehicle at a decelerating speed against the obstacle.

Claim 5 (Previously Presented): A method according to claim 1, comprising driving at least one wheel of the mine vehicle against the obstacle.

Claim 6 (Previously Presented): A method according to claim 1, comprising driving the frame of the mine vehicle against the obstacle.

Claim 7 (Currently Amended): A system for stopping an unmanned mine vehicle in a predetermined position, the system comprising ~~at least~~:
a control unit including at least a first control unit in the mine vehicle;

a second control unit outside the mine vehicle;
a data transmission connection between said control units;
means for monitoring ~~the a~~ speed of the mine vehicle and ~~the a~~ speed of ~~the a~~ driving power transmission of the mine vehicle,
at least one physical obstacle arranged in a predetermined position, against which the mine vehicle is arranged to be driven;
and means for stopping the mine vehicle when ~~the a~~ ratio of the speed of the driving power transmission of the mine vehicle to ~~the a~~ speed of the vehicle exceeds a predetermined limit value.

Claim 8 (Currently Amended): A system according to claim 7, wherein the system comprises members for monitoring the speed of the traction wheels of the vehicle and for determining ~~the a~~ speed of the driving power transmission.

Claim 9 (Currently Amended): A system according to claim 7, wherein the system comprises means for monitoring ~~the a~~ rotation speed of the motor of the mine vehicle;
and the system is arranged to stop the mine vehicle when ~~the a~~ ratio of the rotation speed of the motor to the speed of the mine vehicle exceeds a limit value defined according to ~~the a~~ gear used.

Claim 10 (Currently Amended): A system for stopping an unmanned mine vehicle in a predetermined position, the system comprising:

a control system including at least a control unit in the mine vehicle;
at least one physical obstacle arranged in a predetermined position, against which the mine vehicle is arranged to be driven;
means for determining ~~the~~ tractive resistance of the mine vehicle when said obstacle is approached;
and means for stopping the mine vehicle when the tractive resistance exceeds a predetermined limit value.

Claim 11 (Currently Amended): A system according to claim 10, wherein
the system comprises means for determining ~~the a~~ speed of the mine vehicle;
the system comprises means for monitoring ~~the a~~ rotation speed of ~~the a~~ motor of the mine vehicle;

and the system is arranged to stop the mine vehicle when ~~the a~~ ratio of the rotation speed of the motor to the speed of the mine vehicle exceeds a limit value defined according to ~~the a~~ gear used.

Claim 12 (Currently Amended): A system according to claim 10, wherein
the system comprises members for monitoring ~~the~~ speed of the traction wheels of the vehicle and for determining ~~the a~~ speed of the driving power transmission.